

THE PURDUE LANDSCAPE REPORT

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October is Firewood Awareness Month!

(Bob Bruner, rbbruner@purdue.edu)

As emerald ash borer reached its highest populations throughout the landscape in Indiana, Purdue University, partnered with other organizations, helped to spread several messages intended to engage the public in helping limit the movement of the insect. Readers may recall one such message in the form of bumper stickers with the phrase, "Don't Move the Firewood, It Bugs Me!". While this message is approaching 20 years old, its importance is no less now than it was at the height of the invasion. Firewood was identified as a major vector for emerald ash borer, and much of the insect's expansion throughout the state was facilitated by its transport through susceptible areas. Invasions of exotic forest pests are ongoing in Indiana, and many species use trees as a source of nutrition, oviposition substrate, and as shelter, meaning they can be found in firewood. Managing the use and transport of firewood can greatly assist in preventing the spread of many invasive species, such as spongy moth and spotted lanternfly.

Understanding how firewood becomes a vector for invasive insects is an important first step in limiting their movement. During the height of the emerald ash borer invasion, dead ash trees would be cut as they became unsightly, brittle, and potentially dangerous, and wood would be used firewood. This firewood would also be infested, often carrying eggs, larvae, and developing pupa of emerald ash borer. It would then be sold and transported, often to places like state parks and private woodlands that contained plenty of potential new host trees.

Any eggs or pupae left in firewood that sat through the winter would hatch out, spreading new emerald ash borers into yet another landscape. This process is much the same for several insect species. For example, spotted lanternfly will lay egg masses on trees, typically covered in a protective secretion that acts as an effective camouflage. These egg masses can easily be mistaken for mud, and it's not unusual to miss their presence altogether. Just like with emerald ash borer, firewood with egg

masses can be transported to sensitive areas, introducing spotted lanternfly to a new habitat. Unlike emerald ash borer, however, many of our invasive species of concern are significantly more generalist in their host preferences.

Improving one's knowledge of invasive forest pests improves the ability to limit their movement, especially when it comes to the use of firewood. Like with any integrated pest management plan, understanding the biology and ecology of an insect will help control it most effectively. Emerald ash borer specialize in ash, so the chances of them being present in other species is exceedingly rare, if ever. Spotted lanternfly is able to lay egg masses on virtually any surface, but in Indiana, they are most commonly associated with tree-of-heaven near railroad tracks. If that combination of factors is not present, your chances of encountering them is low, and the egg masses are on the surface, so they can be removed. Spongy moth is limited to northern Indiana and feed primarily on oak species, and their egg masses are easily seen. These are just a few examples of how knowledge of these insect's life cycle can enhance one's ability to identify their presence.

Even with all the information above, the most important thing you can do is use firewood where it has been cut. If you plan to go camping in another county, check ahead with local firewood sellers and determine where it was cut. According to the Nature Conservancy and the Don't Move The Firewood campaign, so long as firewood was cut within 50 miles of where it will be burned, it should be relatively safe and not transport an invasive species beyond its infestation site. They also emphasize planning ahead and checking if there are any local rules or laws governing the use of firewood in the area you plan to use it. If it's not possible to get locally-source firewood, consider purchasing USDA-APHIS certified heat-treated firewood, which can be easily identified by the certification seal. Check out the resources below for more information on the use of firewood and help limit the movement of these exotic pests!

Resources:

Don't Move the Firewood Campaign website:

<https://www.dontmovefirewood.org/>

ReportINvasive website:

<https://ag.purdue.edu/reportinvasive/>



Photo credit: Spongy moth with egg masses, Jeff Burbrink;
Spotted lanternfly with egg mass, Elizabeth Barnes



Photo credit: Spongy moth with egg masses, Jeff Burbrink;
Spotted lanternfly with egg mass, Elizabeth Barnes



Casual observers see sunflowers as big, beautiful, single flowers. However, sunflowers actually have a composite head, with a central cluster of small disc flowers surrounded by a ring of ray flowers that are usually sterile with conspicuous, straplike petals. Some flowers in this family, like dahlias and hybrid chrysanthemums, have no clear distinction between the two types of flowers in the composite flower.

If you've grown sunflowers, you may have noticed that the seed heads tend to follow the sun. Indoor gardeners have often noticed that plants bend toward sunlight. This is called phototropism, and it involves the plant hormone auxin. The process of tracking with the sun is called heliotropism, but its mechanics are more complicated. Researchers at UC Davis and UC Berkeley have discovered that the process involves an internal clock and the hormone auxin. Robert Sanders, Manager of Science Communications at UC Berkeley, wrote, "Sunflowers not only pivot to face the sun as it moves across the sky during the day, but they also rotate 180 degrees during the night to greet the morning sun."

According to North Dakota State University's Sunflower Production Guide, commercial sunflower growers typically grow one of three types of sunflower: oilseed types for vegetable oil, non-oilseed types for human food and bird food markets, and Conoil for dehull confection, oil, or bird food markets. Conoil sunflowers, short for "confection oil" sunflowers, are a hybrid type bred to bridge the gap between oilseed and confection (snack) sunflowers.

In Indiana, sunflowers will grow on most soil types that are suitable for corn or soybeans. They can be planted during the typical spring planting season, or as a double-crop after wheat. Double-crop sunflower plants are shorter and produce smaller heads than full-season sunflowers.

Former Purdue consumer horticulture specialist, Rosie Lerner, explained that gardeners will find two basic types of sunflowers available: those grown for edible seeds, and ornamental types. "Traditional sunflowers are generally quite tall (over 5 feet) with bright yellow blooms," she said. "Modern cultivars now offer a range of orange, gold, lemon-yellow, bronze, amber, mahogany-red and even white."

She said that highly branched plants may carry numerous smaller

Amazing Sunflowers

(John Woodmansee, jwoodman@purdue.edu)

As you travel in rural Indiana this time of year, you may happen upon a field of sunflowers. It's so beautiful that drivers will occasionally pull off on the side of the road and take pictures. Perhaps you grow sunflowers in a more limited capacity in your home garden. Today, we'll review a few items of interest about these amazing sunflowers as a commercial crop and for gardens.

Sunflowers (*Helianthus annuus*) and their kin comprise perhaps the largest plant family called Asteraceae (formerly known as Compositae). This family of plants comprises about 10% of all flowering plants. Some relatives of sunflowers within this family include dandelion, aster, chrysanthemum, and zinnia. The family may be referred to as the aster, daisy, composite, or sunflower family.

heads. "Some cultivars have been bred to fill the center with additional rows of ray-type flowers, giving a fuller, double-flowered appearance." Other sunflowers are available from dwarf types (1-2 feet) to intermediate height (3-5 feet).

"Sunflowers are easy to grow in just about any type of garden soil and climate," she said. "Choose a sunny location for best flowering."

Finally, for the botanical math enthusiasts out there, the sunflower head represents one of the wonders of nature that involves the Fibonacci sequence, a set in which each number is the sum of the previous two. If you count the spiral rows of seeds clockwise and counter-clockwise on a sunflower starting with the same outside seed, you will usually find a pair of numbers from the sequence. That's just a teaser – look it up for yourself, then count seeds on a sunflower!

Find Lerner's original article, go to

<https://www.purdue.edu/hla/sites/yardandgarden/sunflowers-for-midwestern-gardens/>. Find the above-referenced North Dakota State University resource at:

<https://www.ndsu.edu/agriculture/extension/publications/sunflower-production-guide>.

Purdue Turf and Landscape Seminar: Don't miss the opportunity to attend in-person or virtual!

(Kyle Daniel, daniel38@purdue.edu)

Join the Purdue Turf and Landscape Seminar in Person or Virtual - November 19-20, 2025! Advance your expertise, earn pesticide credits, and connect with top Green Industry professionals at this two-day in-person and virtual, live event in West Lafayette, Indiana.

Elevate Your Turf and Landscape Game The 2025 Turf and Landscape Seminar, hosted by the Midwest Regional Turf Foundation, returns this November at Purdue University's W.H. Daniel Turfgrass Research and Diagnostic Center. Designed for *intermediate and advanced turf and landscape professionals*, this seminar delivers cutting-edge insights and practical strategies for managing turf and landscape systems.

New for 2025 The seminar will be offered virtually for those professionals that can't attend in person. Take advantage of this opportunity to gain valuable training and CCH's from your home or office.

Event Details

- **Dates:** Wednesday, November 19 – Thursday, November 20, 2025
- **Time:** 8:00 AM – 4:00 PM both days
- **Location:** 1340 Cherry Ln, West Lafayette, IN 47907
- **Capacity:** In-person is limited to the first 70 registrants
- **Contact:** 765-494-8039

Registration Info

- **Cost:**
 - \$260 for MRTF members
 - \$350 for non-members
- **Online Registration:** <https://tinyurl.com/rfhycv7d>

Important Reminders

- You must attend *both full days* to receive all available credits.
- If virtual, you must keep your camera turned on to receive credits.

Whether you're looking to sharpen your skills, maintain your applicator license, or stay ahead of industry trends, the Purdue Turf and Landscape Seminar is your must-attend event this fall. Mark your calendar and prepare to grow your knowledge from the ground up!

Agenda:

Day 1 - Wednesday, November 19, 2025

8:00-8:30 Registration

8:30-8:45 Opening Comments, *Kyle Daniel & Lee Miller*

8:45-9:45 Two Decades in the Dirt: What We've Learned About White Grub Control, *Doug Richmond*

9:45-10:00 Break

10:00-11:00 Picking a Non-Selective Herbicide, *Aaron Patton*

11:00-12:00 Feeding Ideas for Healthy Lawns, *Cale Bigelow*

12:00-1:15 Lunch (on your own)

1:15-2:15 Cankers and Dieback Diseases in the Landscape, *Tom Creswell*

2:15-3:15 Turfgrass Disease Control Strategies with and without Fungicides, *Lee Miller*

3:15-4:15 What's Happening with OISC and Regulation, *Aaron Kreider*

Day 2 - Thursday, November 20, 2025

8:00-8:30 Review of Day 1, *Kyle Daniel & Lee Miller*

8:30-9:30 What's Killing Our Trees, *Ben McCallister*

9:30-10:30 Reducing Water Use While Maintaining Turf Performance, *Jada Powlen*

10:30-10:45 Break

10:45-11:45 Battling Yellow Nutsedge & Other Sedges in Indiana, *Brandon McNally*

11:45-12:30 Lunch (provided)

12:30-1:30 Protecting the Public and Earning a Living: Adding Mosquito Work to Your Operation, *Fred Whitford*

1:30-2:30 Protecting the Public and Earning a Living: Adding Tick Work to Your Operation, *Fred Whitford*

2:30-3:30 Beyond the Target: The Science Behind Herbicide Injury and Plant Prognosis, *Kyle Daniel*

3:30-3:45 Closing: Survey and CCH Forms

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